MEGABLAST 1.2.3-Paracel [2001-11-20]
<u>Reference</u>:
Zheng Zhang, Scott Schwartz, Lukas Wagner, and Webb Miller (2000),
"A greedy algorithm for aligning DNA sequences",
J Comput Biol 2000; 7(1-2):203-14.
Database: Homo_sapiens.latestgp.masked.fa
          44,521 sequences; 200,768,834,160 total letters
Query= seqid23
        (3660 letters)

```
                                                            Score       E
Sequences producing significant alignments:                (bits)    Value

AC007600.5.1.183083                                          505     e-140
AC096996.1.1.194627                                          454     e-124
```

>AC007600.5.1.183083
          Length = 183083

 Score = 505 bits (255), Expect = e-140
 Identities = 255/255 (100%)
 Strand = Plus / Plus


```
Query: 1355  agaagtttttcctccaggagagccctgttttctatgtccagacattacaagaccccagca 1414
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46566 agaagtttttcctccaggagagccctgttttctatgtccagacattacaagaccccagca 46625


Query: 1415  aagctctggtctttgaggaggccaccttgtcatggcaacagacctgtcccgggatcgtca 1474
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46626 aagctctggtctttgaggaggccaccttgtcatggcaacagacctgtcccgggatcgtca 46685


Query: 1475  atggggcactggagctggagaggaacgggcatgcttctgaggggatgaccaggcctagag 1534
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46686 atggggcactggagctggagaggaacgggcatgcttctgaggggatgaccaggcctagag 46745


Query: 1535  atgccctcgggccagaggaagaagggaacagcctgggcccagagttgcacaagatcaacc 1594
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46746 atgccctcgggccagaggaagaagggaacagcctgggcccagagttgcacaagatcaacc 46805


Query: 1595  tggtggtgtccaagg 1609
             |||||||||||||||
Sbjct: 46806 tggtggtgtccaagg 46820
```


 Score = 458 bits (231), Expect = e-125
 Identities = 234/235 (99%)
 Strand = Plus / Plus


```
Query: 544   atattgattataccaaagatcctggaatattcagaagagcagttggggaatgttgtccat 603
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 34936 atattgattataccaaagatcctggaatattcagaagagcagttggggaatgttgtccat 34995


Query: 604   ggagtgggactctgctttgccctttttctctccgaatgtgtgaagtctctgagtttctcc 663
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Sbjct: 34996 ggagtgggactctgctttgccctttttctctccgaatgtgtgaagtctctgagtttctcc 35055


Query: 664   tccagttggatcatcaaccaacgcacagccatcaggttccaagcagctgtttcctccttt 723
             ||||||||||||||||||||||||||||||||||||||||||| |||||||||||||||||
Sbjct: 35056 tccagttggatcatcaaccaacgcacagccatcaggttccgagcagctgtttcctccttt 35115


Query: 724   gcctttgagaagctcatccaatttaagtctgtaatacacatcacctcaggagagg 778
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 35116 gcctttgagaagctcatccaatttaagtctgtaatacacatcacctcaggagagg 35170



     Score =  454 bits (229), Expect = e-124
     Identities = 229/229 (100%)
     Strand = Plus / Plus


Query: 2217  ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 2276
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70337 ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 70396


Query: 2277  cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 2336
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70397 cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 70456


Query: 2337  ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 2396
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70457 ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 70516


Query: 2397  cctgttaatgggagccataatcatggttatttgcttcatttattatatg 2445
             |||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70517 cctgttaatgggagccataatcatggttatttgcttcatttattatatg 70565



     Score =  408 bits (206), Expect = e-110
     Identities = 206/206 (100%)
     Strand = Plus / Plus


Query: 1877  agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 57285 agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 57344


Query: 1937  gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 1996
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 57345 gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 57404


Query: 1997  cccacgtggggaagcacatttttgaggagtgcattaagaagacactcaggggggaagacgg 2056
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 57405 cccacgtggggaagcacatttttgaggagtgcattaagaagacactcaggggggaagacgg 57464


Query: 2057  tcgtcctggtgacccaccagctgcag 2082
             ||||||||||||||||||||||||||
Sbjct: 57465 tcgtcctggtgacccaccagctgcag 57490



     Score =  385 bits (194), Expect = e-103
     Identities = 194/194 (100%)
```

Strand = Plus / Plus

```
Query: 2857  aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 2916
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 80649 aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 80708


Query: 2917  ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 2976
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 80709 ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 80768


Query: 2977  accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 3036
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 80769 accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 80828


Query: 3037  aggacgggctctgg 3050
             ||||||||||||||
Sbjct: 80829 aggacgggctctgg 80842
```

Score = 371 bits (187), Expect = 2e-99
Identities = 187/187 (100%)
Strand = Plus / Plus

```
Query: 2583  gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 2642
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 73139 gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 73198


Query: 2643  atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 2702
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 73199 atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 73258


Query: 2703  cgtggctttttggcatttcctccaccccctactcctttaaagtcatggctgtcaacatcgt 2762
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 73259 cgtggctttttggcatttcctccaccccctactcctttaaagtcatggctgtcaacatcgt 73318


Query: 2763  gctgcag 2769
             |||||||
Sbjct: 73319 gctgcag 73325
```

Score = 347 bits (175), Expect = 3e-92
Identities = 178/179 (99%)
Strand = Plus / Plus

```
Query: 776   aggccatcagcttcttcaccggtgatgtaaactacctgtttgaagggggtgtgctatggac 835
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 41478 aggccatcagcttcttcaccggtgatgtaaactacctgtttgaagggggtgtgctatggac 41537


Query: 836   ccctagtactgatcacctgcgcatcgctggtcatctgcagcatttcttcctacttcatta 895
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 41538 ccctagtactgatcacctgcgcatcgctggtcatctgcagcatttcttcctacttcatta 41597


Query: 896   ttggatacactgcatttattgccatcttatgctatctcctggtttttcccactggaggta 954
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Sbjct: 41598 ttggatacactgcatttattgccatcttatgctatctcctggtttttcccactggcggta 41656
```

```
Score = 337 bits (170), Expect = 3e-89
Identities = 170/170 (100%)
Strand = Plus / Plus


Query: 3401  agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc  3460
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90103 agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc  90162


Query: 3461  agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca  3520
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90163 agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca  90222


Query: 3521  ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg  3570
             ||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90223 ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg  90272



Score = 321 bits (162), Expect = 2e-84
Identities = 162/162 (100%)
Strand = Plus / Plus


Query: 235   aggtttcctgcccccccagcccctggacaatgctggcctgttctcctacctcaccgtgtca  294
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 29801 aggtttcctgcccccccagcccctggacaatgctggcctgttctcctacctcaccgtgtca  29860


Query: 295   tggctcaccccgctcatgatccaaagcttacggagtcgcttagatgagaacaccatccct  354
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 29861 tggctcaccccgctcatgatccaaagcttacggagtcgcttagatgagaacaccatccct  29920


Query: 355   ccactgtcagtccatgatgcctcagacaaaaatgtccaaagg  396
             ||||||||||||||||||||||||||||||||||||||||||
Sbjct: 29921 ccactgtcagtccatgatgcctcagacaaaaatgtccaaagg  29962



Score = 319 bits (161), Expect = 7e-84
Identities = 161/161 (100%)
Strand = Plus / Plus


Query: 3049  gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt  3108
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 82347 gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt  82406


Query: 3109  ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca  3168
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 82407 ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca  82466


Query: 3169  gtgatccctcaagatccagtgctgctctcaggaaccatcag  3209
             |||||||||||||||||||||||||||||||||||||||||
Sbjct: 82467 gtgatccctcaagatccagtgctgctctcaggaaccatcag  82507



Score = 299 bits (151), Expect = 6e-78
Identities = 151/151 (100%)
```

Query: 393   aaggcttcaccgcctttgggaagaagaagtctcaaggcgagggattgaaaaagcttcagt 452
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 33335 aaggcttcaccgcctttgggaagaagaagtctcaaggcgagggattgaaaaagcttcagt 33394

Query: 453   gcttctggtgatgctgaggttccagagaacaaggttgattttcgatgcacttctgggcat 512
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 33395 gcttctggtgatgctgaggttccagagaacaaggttgattttcgatgcacttctgggcat 33454

Query: 513   ctgcttctgcattgccagtgtactcgggcca 543
              |||||||||||||||||||||||||||||||
Sbjct: 33455 ctgcttctgcattgccagtgtactcgggcca 33485

Score = 297 bits (150), Expect = 3e-77
Identities = 150/150 (100%)
Strand = Plus / Plus

Query: 950   aggtattcatgacaagaatggctgtgaaggctcagcatcacacatctgaggtcagcgacc 1009
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 42421 aggtattcatgacaagaatggctgtgaaggctcagcatcacacatctgaggtcagcgacc 42480

Query: 1010   agcgcatccgtgtgaccagtgaagttctcacttgcattaagctgattaaaatgtacacat 1069
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 42481 agcgcatccgtgtgaccagtgaagttctcacttgcattaagctgattaaaatgtacacat 42540

Query: 1070   gggagaaaccatttgcaaaaatcattgaag 1099
              ||||||||||||||||||||||||||||||
Sbjct: 42541 gggagaaaccatttgcaaaaatcattgaag 42570

Score = 293 bits (148), Expect = 4e-76
Identities = 151/152 (99%)
Strand = Plus / Plus

Query: 1098   agacctaagaaggaaggaaaggaagctattggagaagtgcgggcttgtccagagcctgac 1157
              ||||||||||||||||||||||||||| |||||||||||||||||||||||||||||||
Sbjct: 42736 agacctaagaaggaaggaaaggaaactattggagaagtgcgggcttgtccagagcctgac 42795

Query: 1158   aagtataaccttgttcatcatccccacagtggccacagcggtctgggttctcatccacac 1217
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 42796 aagtataaccttgttcatcatccccacagtggccacagcggtctgggttctcatccacac 42855

Query: 1218   atccttaaagctgaaactcacagcgtcaatgg 1249
              ||||·||||||||||||||||||||||||||
Sbjct: 42856 atccttaaagctgaaactcacagcgtcaatgg 42887

Score = 289 bits (146), Expect = 6e-75
Identities = 188/202 (93%)
Strand = Plus / Plus

Query: 1877   agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
              |||||| |||||||||||||||||||||||||||||||||| |||||||| ||||||||||

```
Sbjct: 142145 agattggggagcggggcctcaacctctctggggggcagaggcagaggattagcctggccc 142204


Query: 1937    gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 1996
               |||| ||||| |||||||||||||| |||||||||||||||||||||||| || ||||||||
Sbjct: 142205 gcgctgtctactccgaccgtcagctctacctgctggacgacccctgtcggccgtggacg 142264


Query: 1997    cccacgtggggaagcacattttttgaggagtgcattaagaagacactcaggggggaagacgg 2056
               ||||||||||||||| | ||||||||||||||||||||||| ||||||| |||||| |
Sbjct: 142265 cccacgtggggaagcacgtctttgaggagtgcattaagaagacgctcaggggaaagacag 142324


Query: 2057    tcgtcctggtgacccaccagct 2078
               ||||||||||||||||||||||
Sbjct: 142325 tcgtcctggtgacccaccagct 142346



 Score =  278 bits (140), Expect = 2e-71
 Identities = 140/140 (100%)
 Strand = Plus / Plus


Query: 2445   gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctcccttt 2504
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70675 gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctcccttt 70734


Query: 2505   attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 2564
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70735 attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 70794


Query: 2565   tgaagacttcatcagccagt 2584
              ||||||||||||||||||||
Sbjct: 70795 tgaagacttcatcagccagt 70814



 Score =  278 bits (140), Expect = 2e-71
 Identities = 140/140 (100%)
 Strand = Plus / Plus


Query: 2080   cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 2139
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 59486 cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 59545


Query: 2140.  ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 2199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 59546 ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 59605


Query: 2200   cacaaggaagccacttcggt 2219
              ||||||||||||||||||||
Sbjct: 59606 cacaaggaagccacttcggt 59625



 Score =  276 bits (139), Expect = 9e-71
 Identities = 139/139 (100%)
 Strand = Plus / Plus


Query: 100    aaaacctatactctccaagatggcccctggagtcagcaagagagaaatcctgaggctcca 159
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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```
Sbjct: 27194 aaaacctatactctccaagatggcccctggagtcagcaagagagaaatcctgaggctcca 27253


Query: 160   gggagggcagctgtcccaccgtgggggaagtatgatgctgccttgagaaccatgattccc 219
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 27254 gggagggcagctgtcccaccgtgggggaagtatgatgctgccttgagaaccatgattccc 27313


Query: 220   ttccgtcccaagccgaggt 238
             |||||||||||||||||||
Sbjct: 27314 ttccgtcccaagccgaggt 27332



 Score =  252 bits (127), Expect = 1e-63
 Identities = 127/127 (100%)
 Strand = Plus / Plus


Query: 1679  agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 1738
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 52228 agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 52287


Query: 1739  aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 1798
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 52288 aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 52347


Query: 1799  aggcccg 1805
             |||||||
Sbjct: 52348 aggcccg 52354



 Score =  226 bits (114), Expect = 8e-56
 Identities = 114/114 (100%)
 Strand = Plus / Plus


Query: 3289  atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 3348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 87547 atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 87606


Query: 3349  gtgggggagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag 3402
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 87607 gtgggggagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag 87660



 Score =  216 bits (109), Expect = 7e-53
 Identities = 109/109 (100%)
 Strand = Plus / Plus


Query: 1248  ggccttcagcatgctggcctccttgaatctccttcggctgtcagtgttctttgtgcctat 1307
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 44216 ggccttcagcatgctggcctccttgaatctccttcggctgtcagtgttctttgtgcctat 44275


Query: 1308  tgcagtcaaaggtctcacgaattccaagtctgcagtgatgaggttcaag 1356
             |||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 44276 tgcagtcaaaggtctcacgaattccaagtctgcagtgatgaggttcaag 44324



 Score =  196 bits (99), Expect = 7e-47
```

Identities = 99/99 (100%)
Strand = Plus / Plus

Query: 1   atgactaggaagaggacatactgggtgcccaactcttctggtggcctcgtgaatcgtggc 60
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 25846   atgactaggaagaggacatactgggtgcccaactcttctggtggcctcgtgaatcgtggc 25905

Query: 61   atcgacataggcgatgacatggtttcaggacttatttat 99
               |||||||||||||||||||||||||||||||||||||||
Sbjct: 25906   atcgacataggcgatgacatggtttcaggacttatttat 25944

Score = 188 bits (95), Expect = 2e-44
Identities = 95/95 (100%)
Strand = Plus / Plus

Query: 3566   aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag 3625
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90397   aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag 90456

Query: 3626   ccctcatggccacagccacttcttcactgagataa 3660
               |||||||||||||||||||||||||||||||||||
Sbjct: 90457   ccctcatggccacagccacttcttcactgagataa 90491

Score = 182 bits (92), Expect = 1e-42
Identities = 92/92 (100%)
Strand = Plus / Plus

Query: 2768   agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca 2827
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 79077   agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca 79136

Query: 2828   cggctgtagagaggatactgcagtacatgaag 2859
               ||||||||||||||||||||||||||||||||
Sbjct: 79137   cggctgtagagaggatactgcagtacatgaag 79168

Score = 161 bits (81), Expect = 4e-36
Identities = 81/81 (100%)
Strand = Plus / Plus

Query: 3208   agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag 3267
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 86796   agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag 86855

Query: 3268   aggacattcctgaccaaggcc 3288
               |||||||||||||||||||||
Sbjct: 86856   aggacattcctgaccaaggcc 86876

Score = 147 bits (74), Expect = 6e-32
Identities = 74/74 (100%)
Strand = Plus / Plus

```
Query: 1805  gatacctccaggtgctccactgctgctccctgaatcgggacctggaacttctgccctttg 1864
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 54466 gatacctccaggtgctccactgctgctccctgaatcgggacctggaacttctgccctttg 54525


Query: 1865  gagacatgacagag 1878
             ||||||||||||||
Sbjct: 54526 gagacatgacagag 54539



 Score =  147 bits (74), Expect = 6e-32
 Identities = 74/74 (100%)
 Strand = Plus / Plus


Query: 1607  aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 1666
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 49269 aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 49328


Query: 1667  ccatcctggaggag 1680
             ||||||||||||||
Sbjct: 49329 ccatcctggaggag 49342



>AC096996.1.1.194627
          Length = 194627

 Score =  454 bits (229), Expect = e-124
 Identities = 229/229 (100%)
 Strand = Plus / Minus


Query: 2217  ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 2276
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173330 ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 173271


Query: 2277  cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 2336
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173270 cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 173211


Query: 2337  ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 2396
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173210 ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 173151


Query: 2397  cctgttaatgggagccataatcatggttatttgcttcatttattatatg 2445
             |||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173150 cctgttaatgggagccataatcatggttatttgcttcatttattatatg 173102



 Score =  408 bits (206), Expect = e-110
 Identities = 206/206 (100%)
 Strand = Plus / Minus


Query: 1877  agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 186382 agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 186323


Query: 1937  gcgccgtctattccgaccgtcagatctacctgctggacgacccccctgtctgctgtggacg 1996
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Sbjct: 186322 gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 186263


Query: 1997    cccacgtggggaagcacattttttgaggagtgcattaagaagacactcaggggggaagacgg 2056
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 186262 cccacgtggggaagcacattttttgaggagtgcattaagaagacactcaggggggaagacgg 186203


Query: 2057    tcgtcctggtgacccaccagctgcag 2082
               ||||||||||||||||||||||||||
Sbjct: 186202 tcgtcctggtgacccaccagctgcag 186177



 Score =  385 bits (194), Expect = e-103
 Identities = 194/194 (100%)
 Strand = Plus / Minus


Query: 2857    aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 2916
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 163018 aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 162959


Query: 2917    ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 2976
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 162958 ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 162899


Query: 2977    accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 3036
               |||||||||||||||||||||||||||||·|||||||||||||||||||||||||||||||
Sbjct: 162898 accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 162839


Query: 3037    aggacgggctctgg 3050
               ||||||||||||||
Sbjct: 162838 aggacgggctctgg 162825



 Score =  371 bits (187), Expect = 2e-99
 Identities = 187/187 (100%)
 Strand = Plus / Minus


Query: 2583    gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 2642
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 170528 gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 170469


Query: 2643    atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 2702
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 170468 atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 170409


Query: 2703    cgtggctttttggcatttcctccacccccctactcctttaaagtcatggctgtcaacatcgt 2762
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 170408 cgtggctttttggcatttcctccacccccctactcctttaaagtcatggctgtcaacatcgt 170349


Query: 2763    gctgcag 2769
               |||||||
Sbjct: 170348 gctgcag 170342



 Score =  337 bits (170), Expect = 3e-89
 Identities = 170/170 (100%)
```

Query: 3401 agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc 3460
```
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```
Sbjct: 153564 agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc 153505

Query: 3461 agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca 3520
```
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```
Sbjct: 153504 agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca 153445

Query: 3521 ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg 3570
```
             ||||||||||||||||||||||||||||||||||||||||||||||||||
```
Sbjct: 153444 ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg 153395

 Score = 319 bits (161), Expect = 7e-84
 Identities = 161/161 (100%)
 Strand = Plus / Minus

Query: 3049 gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt 3108
```
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```
Sbjct: 161320 gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt 161261

Query: 3109 ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca 3168
```
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```
Sbjct: 161260 ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca 161201

Query: 3169 gtgatccctcaagatccagtgctgctctcaggaaccatcag 3209
```
             |||||||||||||||||||||||||||||||||||||||||
```
Sbjct: 161200 gtgatccctcaagatccagtgctgctctcaggaaccatcag 161160

 Score = 289 bits (146), Expect = 6e-75
 Identities = 188/202 (93%)
 Strand = Plus / Minus

Query: 1877 agattggagagcggggcctcaacctctctgggggggcagaaacagaggatcagcctggccc 1936
```
             |||||||| |||||||||||||||||||||||||||||||  ||||||||| |||||||||
```
Sbjct: 101522 agattggggagcggggcctcaacctctctgggggggcagaggcagaggattagcctggccc 101463

Query: 1937 gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 1996
```
             |||| .||||| ||||||||||| |||||||||||||||||||||||| || ||||||||
```
Sbjct: 101462 gcgctgtctactccgaccgtcagctctacctgctggacgaccccctgtcggccgtggacg 101403

Query: 1997 cccacgtggggaagcacatttttgaggagtgcattaagaagacactcaggggaagacgg 2056
```
             |||||||||||||||||| | ||||||||||||||||||||||| ||||||||| ||||| |
```
Sbjct: 101402 cccacgtggggaagcacgtctttgaggagtgcattaagaagacgctcaggggaaagacag 101343

Query: 2057 tcgtcctggtgacccaccagct 2078
```
             ||||||||||||||||||||||
```
Sbjct: 101342 tcgtcctggtgacccaccagct 101321

 Score = 278 bits (140), Expect = 2e-71
 Identities = 140/140 (100%)

Strand = Plus / Minus

```
Query: 2080    cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 2139
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 184181  cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 184122


Query: 2140    ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 2199
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 184121  ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 184062


Query: 2200    cacaaggaagccacttcggt 2219
               ||||||||||||||||||||
Sbjct: 184061  cacaaggaagccacttcggt 184042
```


 Score = 278 bits (140), Expect = 2e-71
 Identities = 140/140 (100%)
 Strand = Plus / Minus

```
Query: 2445    gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctccttt 2504
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 172992  gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctccttt 172933


Query: 2505    attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 2564
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 172932  attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 172873


Query: 2565    tgaagacttcatcagccagt 2584
               ||||||||||||||||||||
Sbjct: 172872  tgaagacttcatcagccagt 172853
```


 Score = 252 bits (127), Expect = 1e-63
 Identities = 127/127 (100%)
 Strand = Plus / Minus

```
Query: 1679    agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 1738
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 191439  agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 191380


Query: 1739    aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 1798
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 191379  aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 191320


Query: 1799    aggcccg 1805
               |||||||
Sbjct: 191319  aggcccg 191313
```


 Score = 226 bits (114), Expect = 8e-56
 Identities = 114/114 (100%)
 Strand = Plus / Minus

```
Query: 3289    atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 3348
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

Sbjct: 156120 atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 156061

Query: 3349   gtggggagagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag 3402
               |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 156060 gtggggagagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag 156007

 Score = 188 bits (95), Expect = 2e-44
 Identities = 95/95 (100%)
 Strand = Plus / Minus

Query: 3566   aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag 3625
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 153270 aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag 153211

Query: 3626   ccctcatggccacagccacttcttcactgagataa 3660
               |||||||||||||||||||||||||||||||||||
Sbjct: 153210 ccctcatggccacagccacttcttcactgagataa 153176

 Score = 182 bits (92), Expect = 1e-42
 Identities = 92/92 (100%)
 Strand = Plus / Minus

Query: 2768   agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca 2827
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 164590 agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca 164531

Query: 2828   cggctgtagagaggatactgcagtacatgaag 2859
               ||||||||||||||||||||||||||||||||
Sbjct: 164530 cggctgtagagaggatactgcagtacatgaag 164499

 Score = 161 bits (81), Expect = 4e-36
 Identities = 81/81 (100%)
 Strand = Plus / Minus

Query: 3208   agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag 3267
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 156871 agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag 156812

Query: 3268   aggacattcctgaccaaggcc 3288
               |||||||||||||||||||||
Sbjct: 156811 aggacattcctgaccaaggcc 156791

 Score = 147 bits (74), Expect = 6e-32
 Identities = 74/74 (100%)
 Strand = Plus / Minus

Query: 1805   gatacctccaggtgctccactgctgctccctgaatcgggacctggaacttctgccctttg 1864
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 189201 gatacctccaggtgctccactgctgctccctgaatcgggacctggaacttctgccctttg 189142

Query: 1865   gagacatgacagag 1878

```
                          |||||||||||||
Sbjct: 189141 gagacatgacagag 189128


     Score =   147 bits (74), Expect = 6e-32
     Identities = 74/74 (100%)
     Strand = Plus / Minus


Query: 1607   aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 1666
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 194398 aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 194339


Query: 1667   ccatcctggaggag 1680
              ||||||||||||||
Sbjct: 194338 ccatcctggaggag 194325
```